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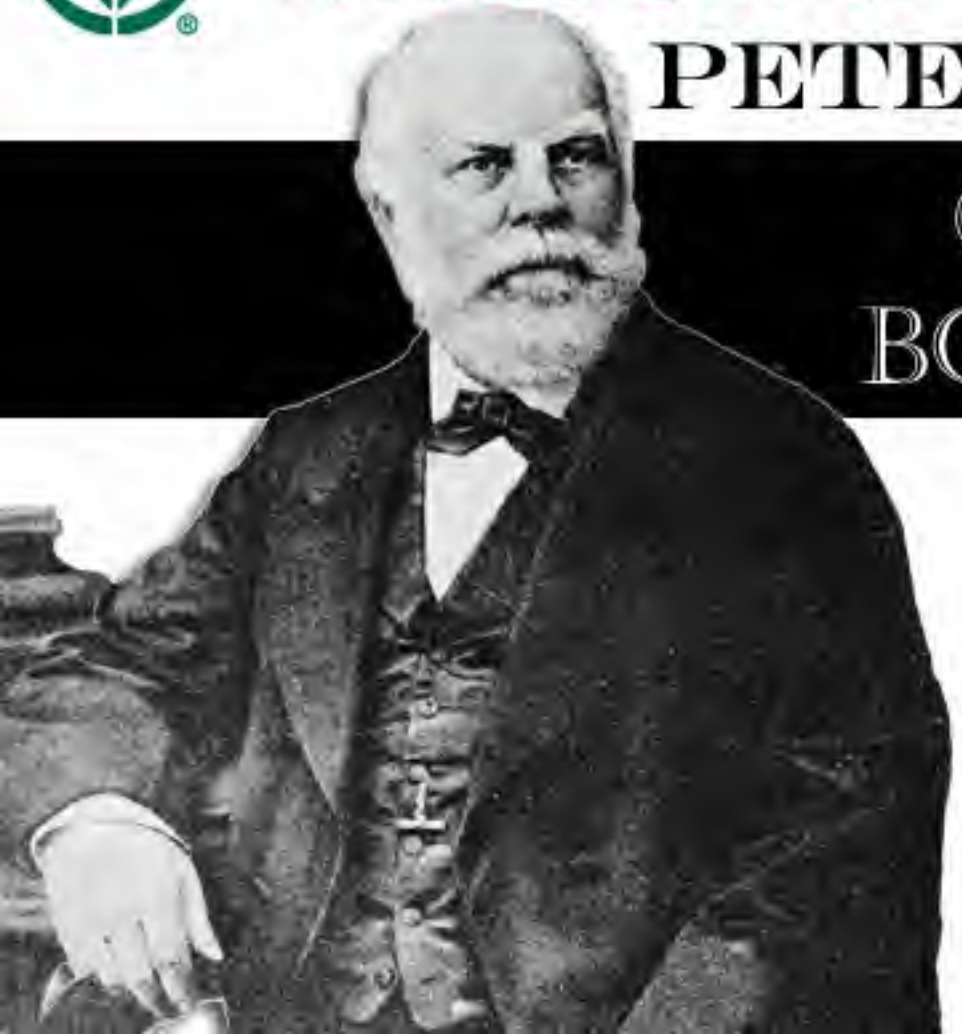

Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Sept 27 1863

Pinus contorta Murray

110.

5 or very rarely
4 Cotyledons

Wind River Mountains
the same

from Laramie Mountains 5 cotyledons
Dr Hayden June 1860

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cm
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MISSOURI BOTANICAL GARDEN

11178

ALEX. LEITCH,

APOTHECARY & PHARMACEUTIST,

Marble Building Cor. Fourth & Olive Sts. St Louis, Mo.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

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Pinus contorta

Sept 30 1863

Colorado E. Hall No 1531 1862

Scales after flowering

X4

X10

Cônes ouverts, d'une année déployés

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JONES & LEITCH, DRUGGISTS

COR. FIFTH & MARKET STREETS.

ST. LOUIS, MO.

J. McKittrick & Co. Cor. Main & Vine.

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Pinus contorta Bolanderi
Bolander May 1866

Oct 14 1870

$\frac{26\frac{1}{2}-30}{415}$ mm mostly $\frac{27}{415}$ mm

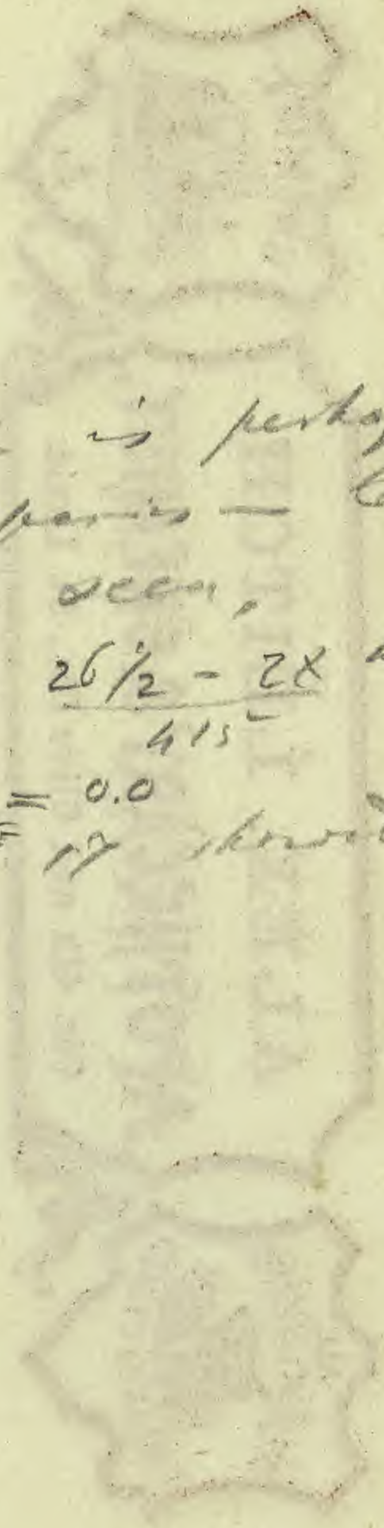
$= 0.065$ mm

× 10

This one pollen grain is perhaps from another species — Larger than any others seen, therefore Latter $\frac{26\frac{1}{2}-27}{415}$ mm

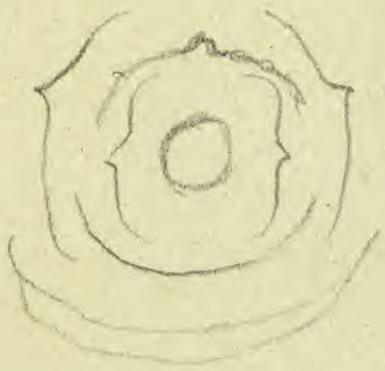
$= 0.0$

reexamination Oct 17 showed all about 0.065 mm



× 4

anterior posterior



6

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A. contorta

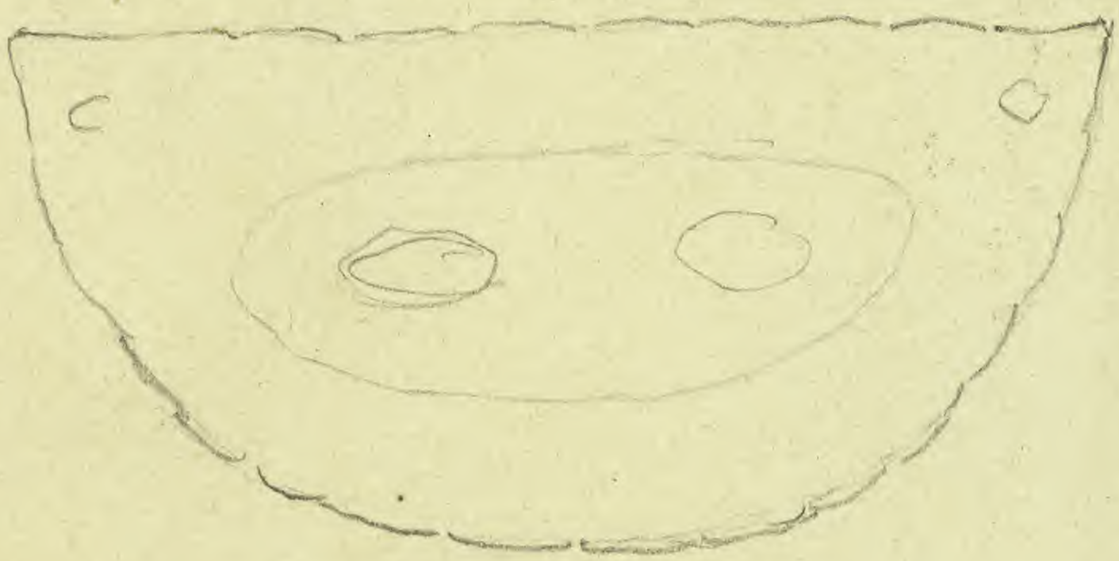
Oct 20 1870

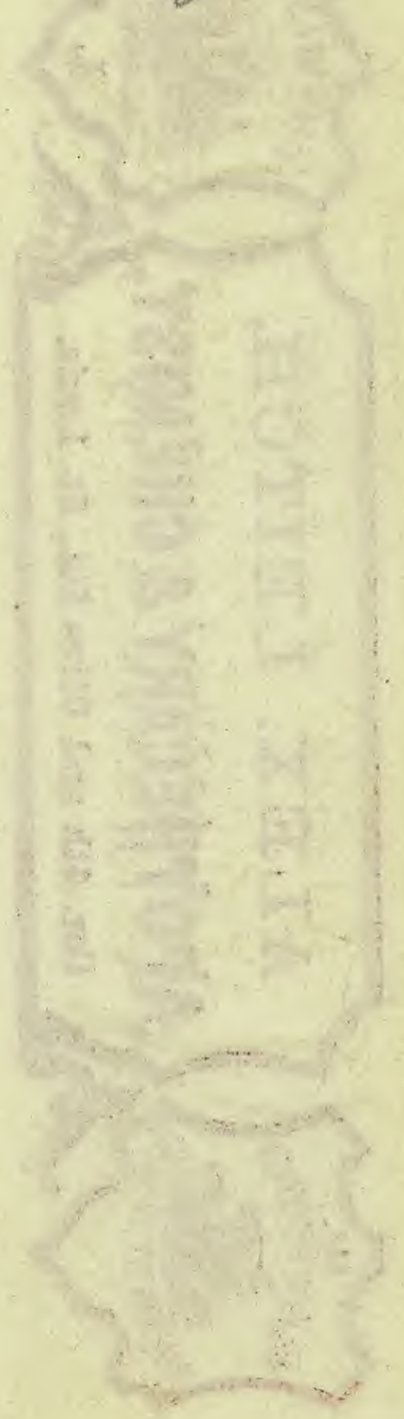
2R30 slate Canyon Calaveras

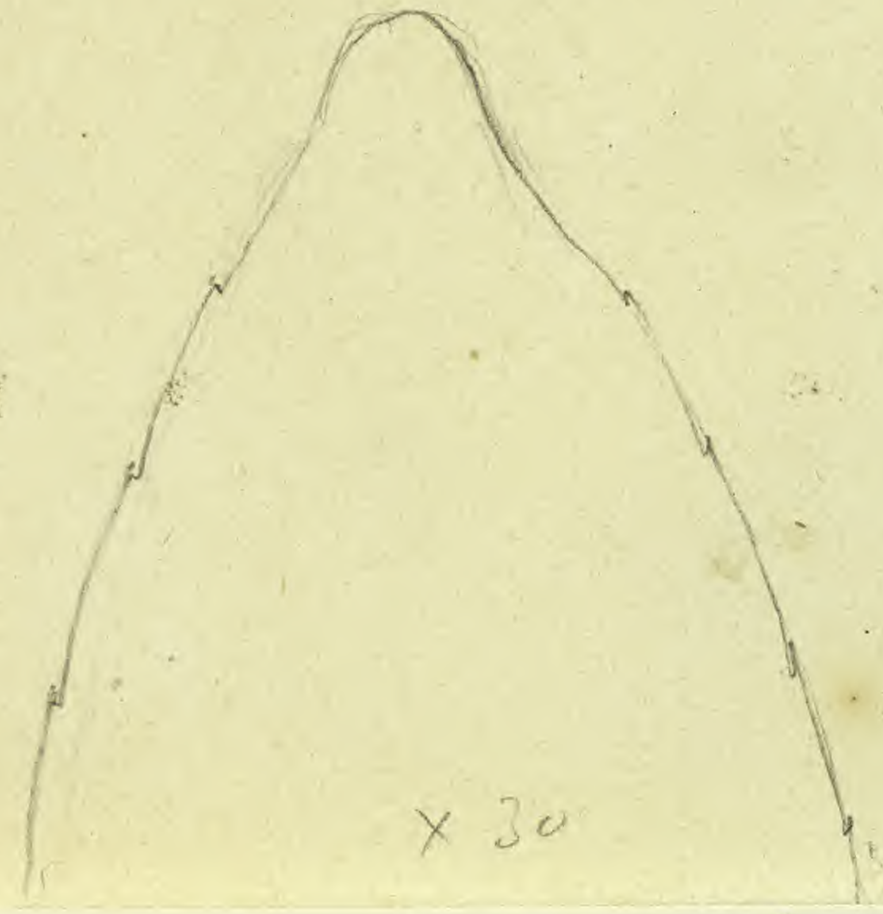
leaves 2 - 2½ mm wide
30 - 35 mm long

x62

x30







x 30

younger

older leaf

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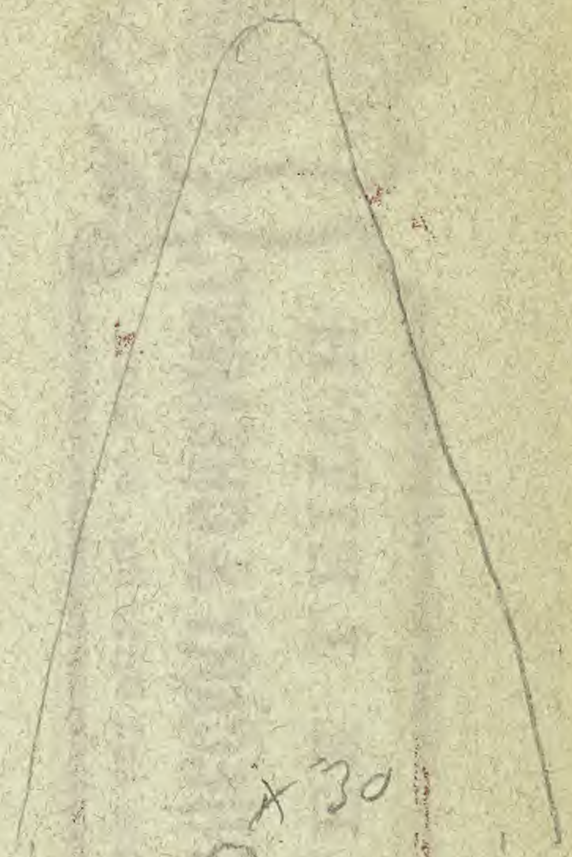
P. contorta Murrayana
Colorado Dr Parry 1864

Feb 22 1876

×30

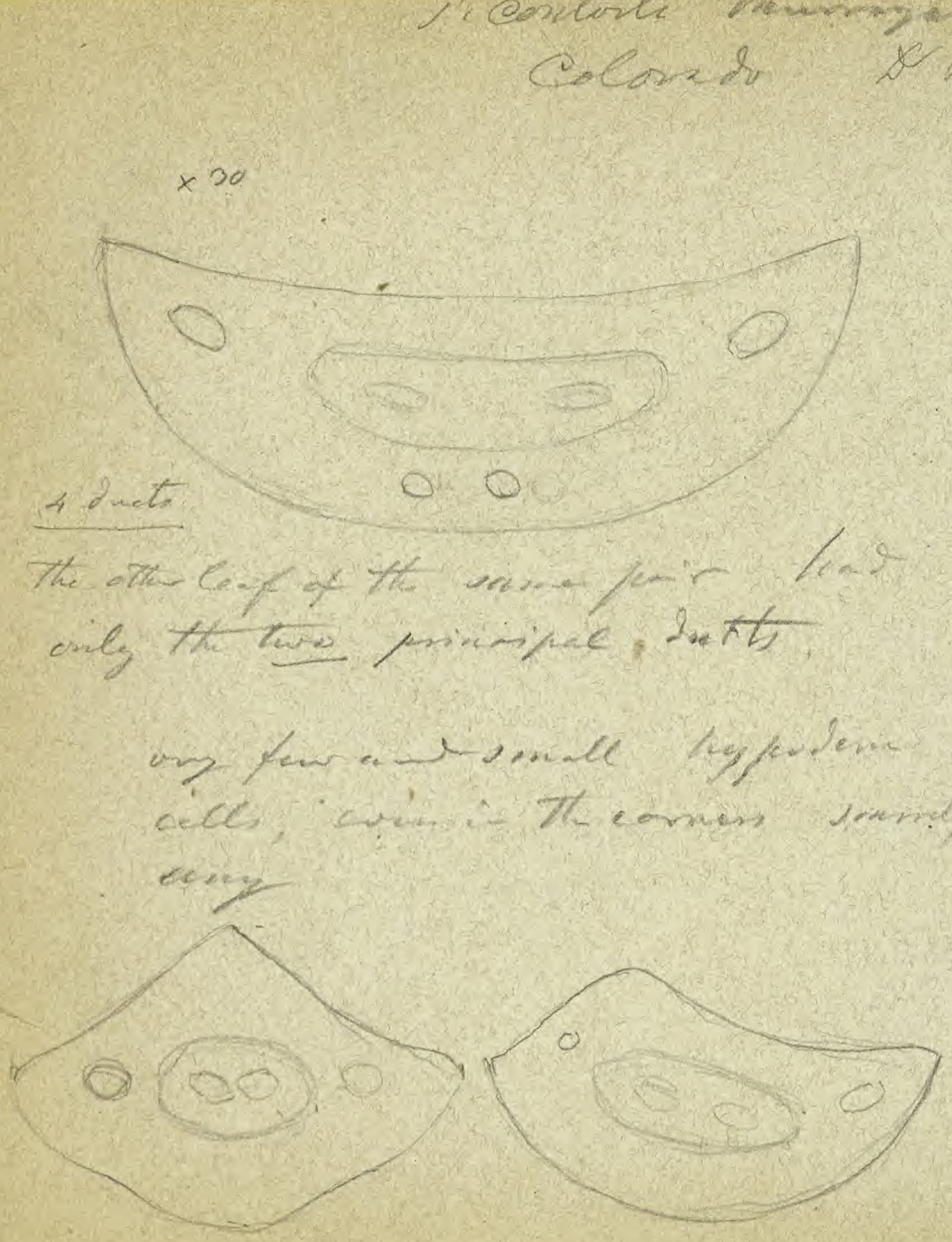
4 ducts

The other leaf of the same pair had only the two principal ducts,



×30

very few and small hypodermal cells, none in the corners round deep



×60

a few of the lowest leaves ternate

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Pinus contorta Bolanderi
Bolander Octob 1866

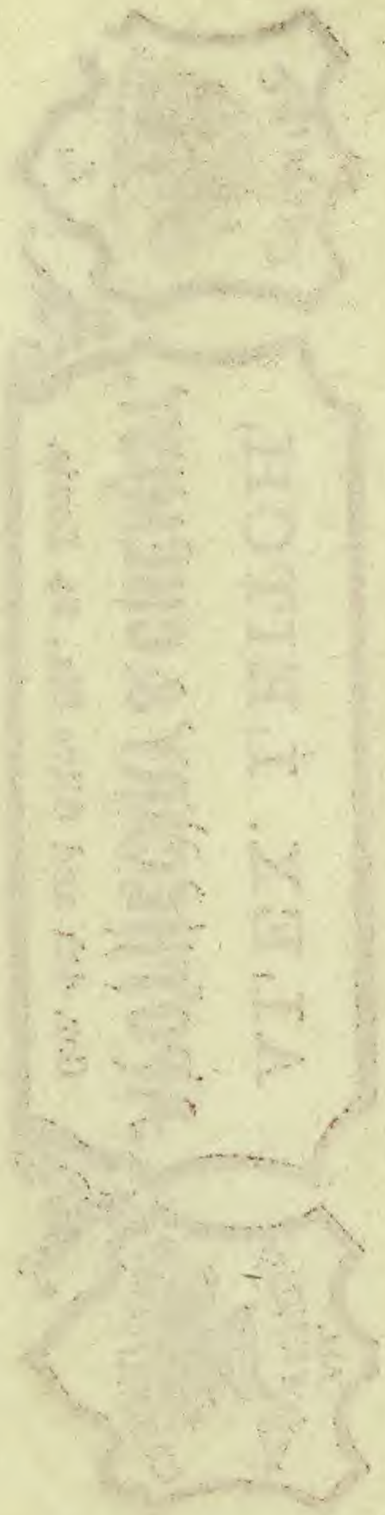
17 Octob 70

×4

terminal bud oval obtuse

×10

young cone of October



spines on back of base obtuse adpressed

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ALL THE NEW REMEDIES CONSTANTLY ON HAND

ALEX. LEITCH,

APOTHECARY & CHEMIST,

Cor. 4th and Olive Sts., St. Louis.

CHEMIST

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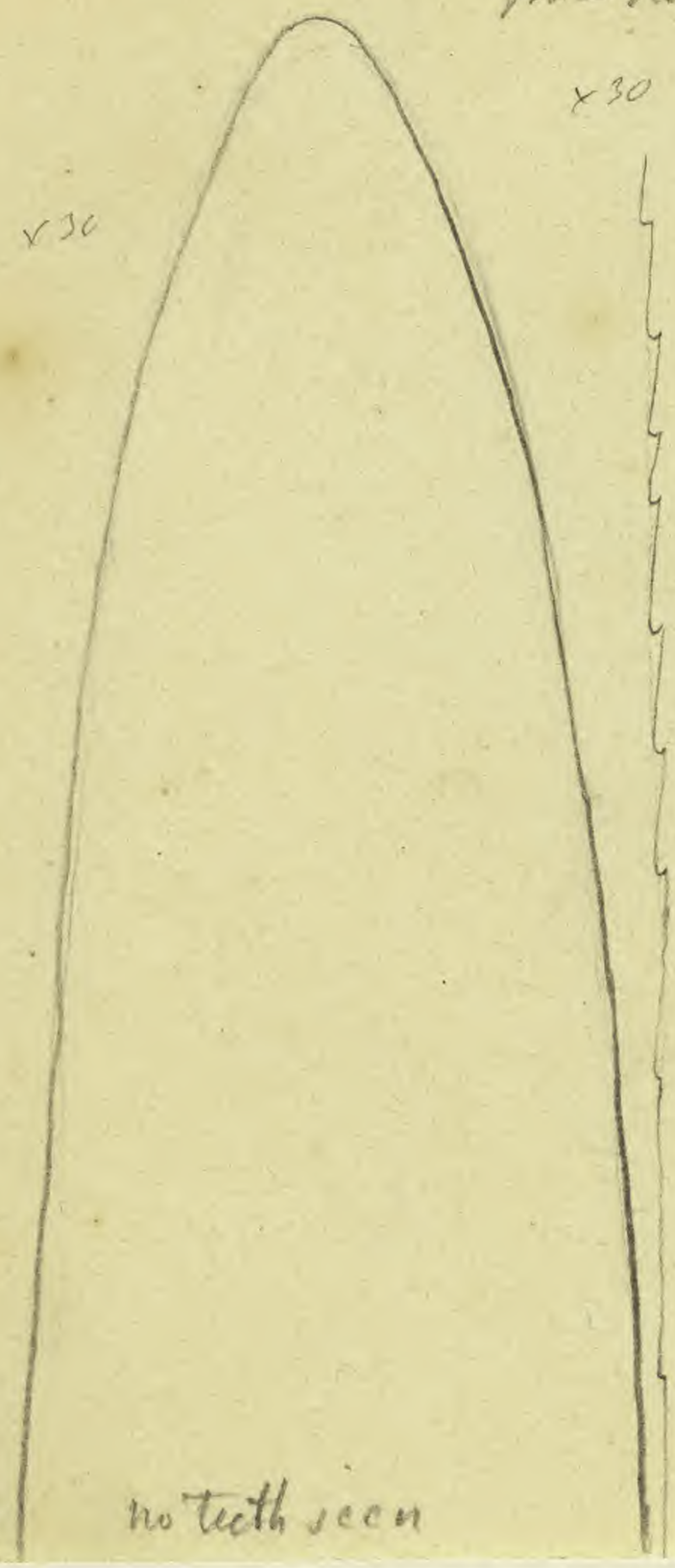
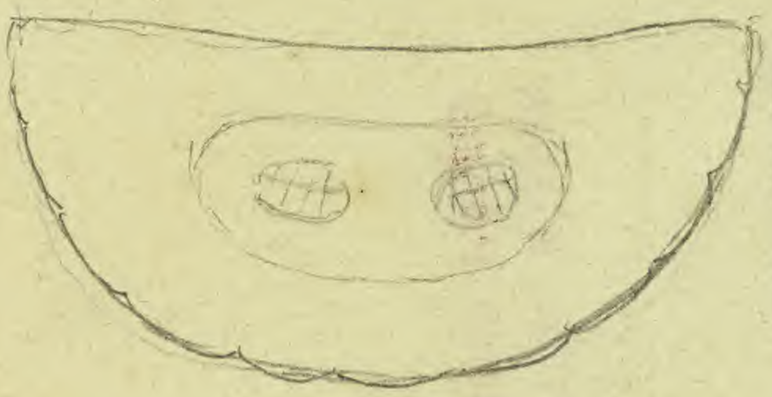
Pines collected from the Sierras. Brewer with Cone

April 20 1871





Catalogue
Herbarium
Gray
Cambridge

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Leitch & Corlies

DRUGGISTS

South West Corner Fifth and Market Streets

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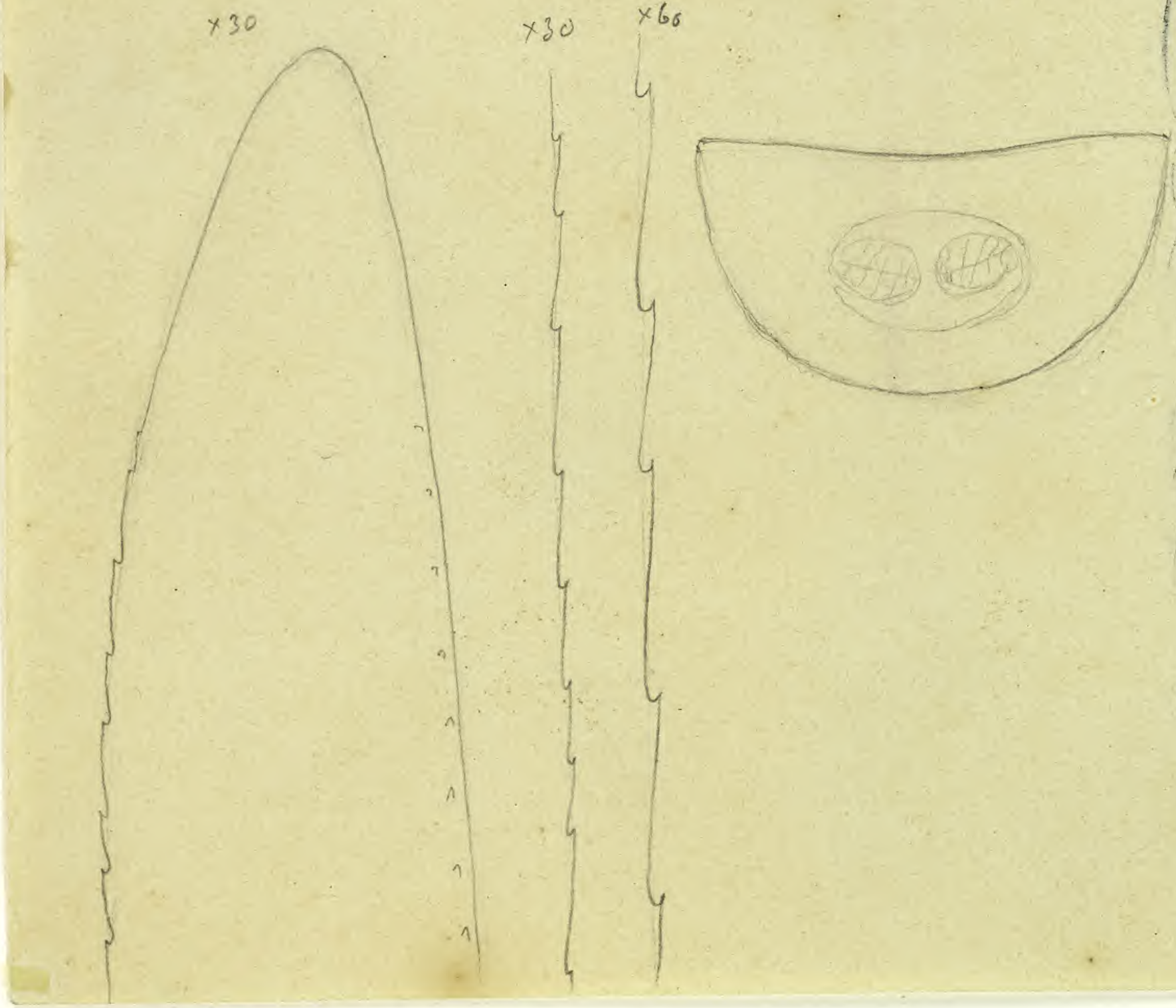
"Pinus ingens" P. Contorta. April 2d 1871

№ 383 Alaska Dr Kellogg



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Leitch & Corlies

DRUGGISTS

South West Corner Fifth and Market Streets

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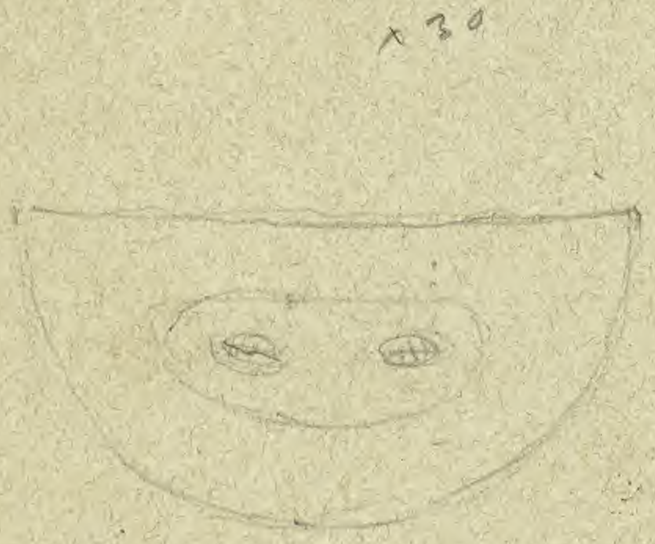
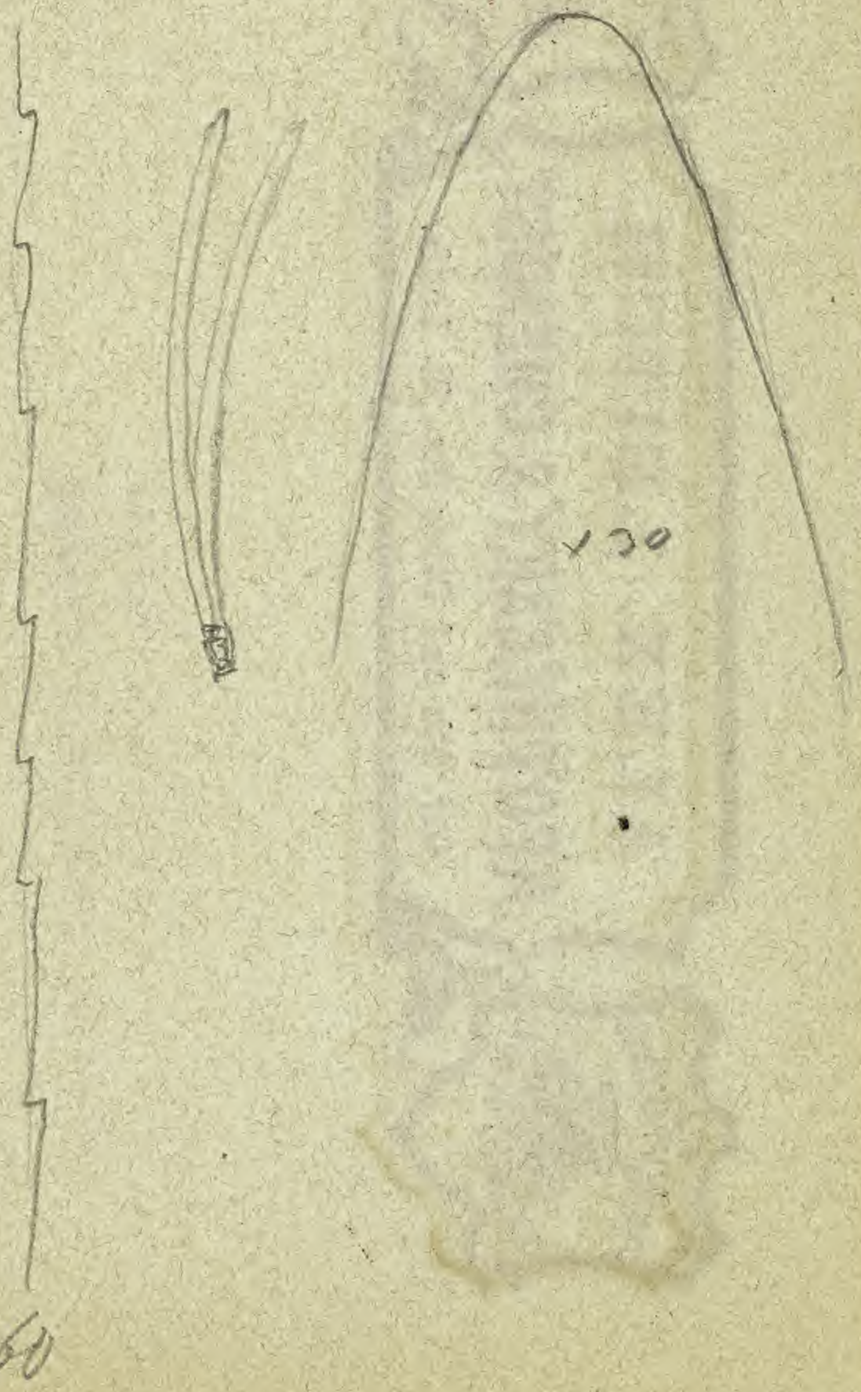
F. emarginata

Feb 22 1876

British Columbia Dawson 1875

male branch





hypodermis slightly, especially above

no ducts not even a trace

0 1 2 3 4 5 6 7 8 9 10
cm
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P. contorta

Febr 22 1876

British Columbia, Dawson 1875

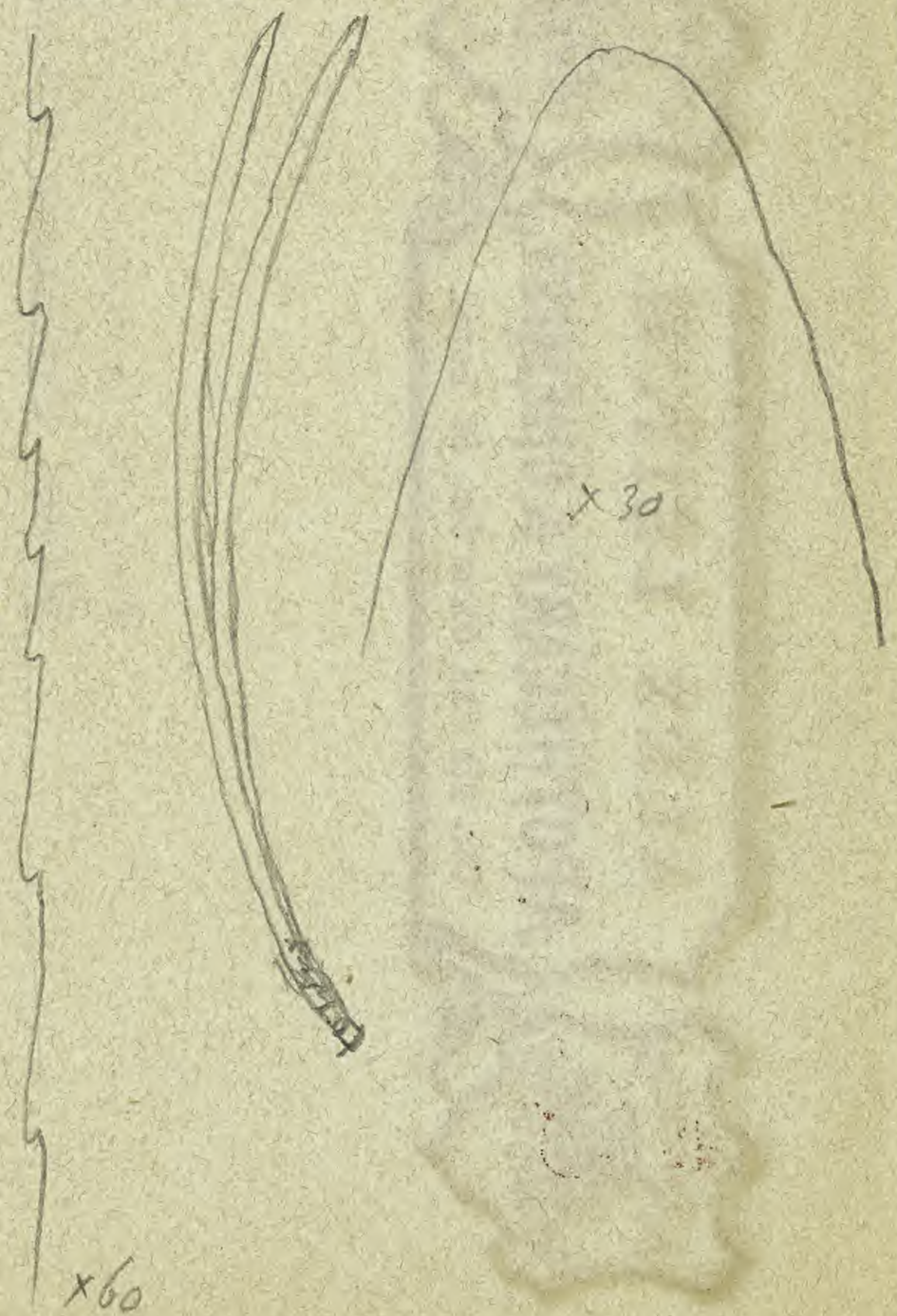
Fertile Branch

Joints distant

Joints small or none

both leaves of same pair!

Joints so different!



x30

x60

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cm
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P. Contorta
Bolanderi

Feb 22 1876

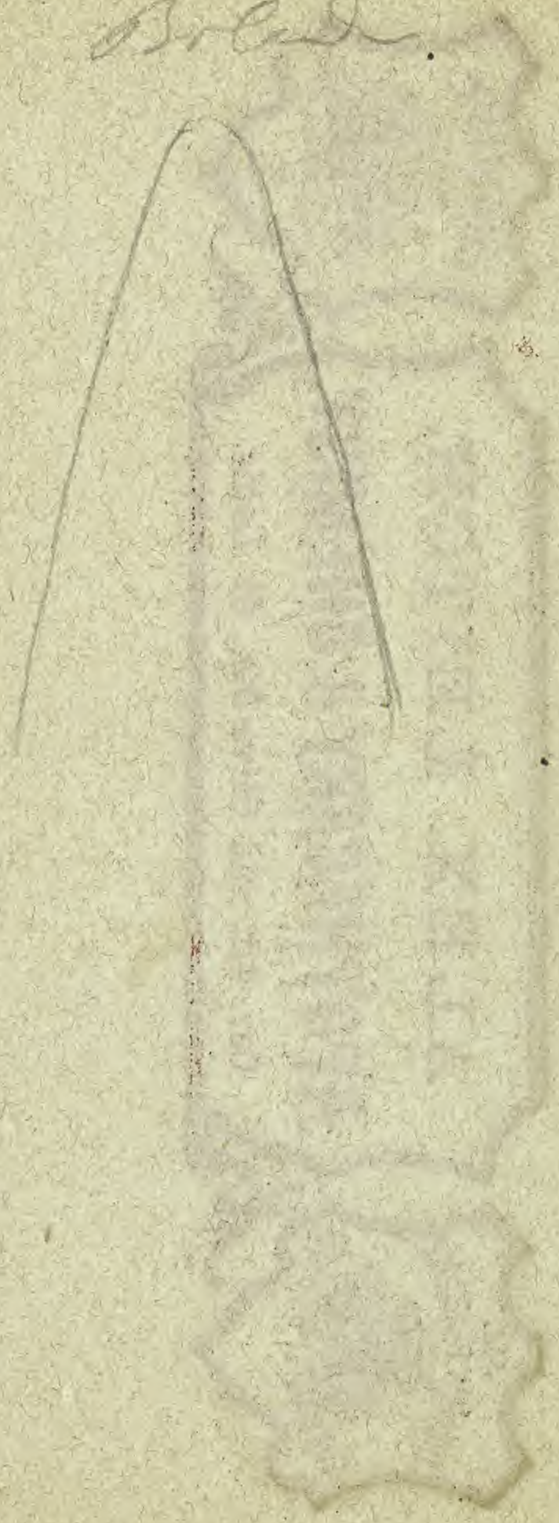
Mendocino Co.

no duct
not even a trace

very few hypoderm-
cells, a few in the
corners, and scarcely any
above or below

x 150

x 60



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cm
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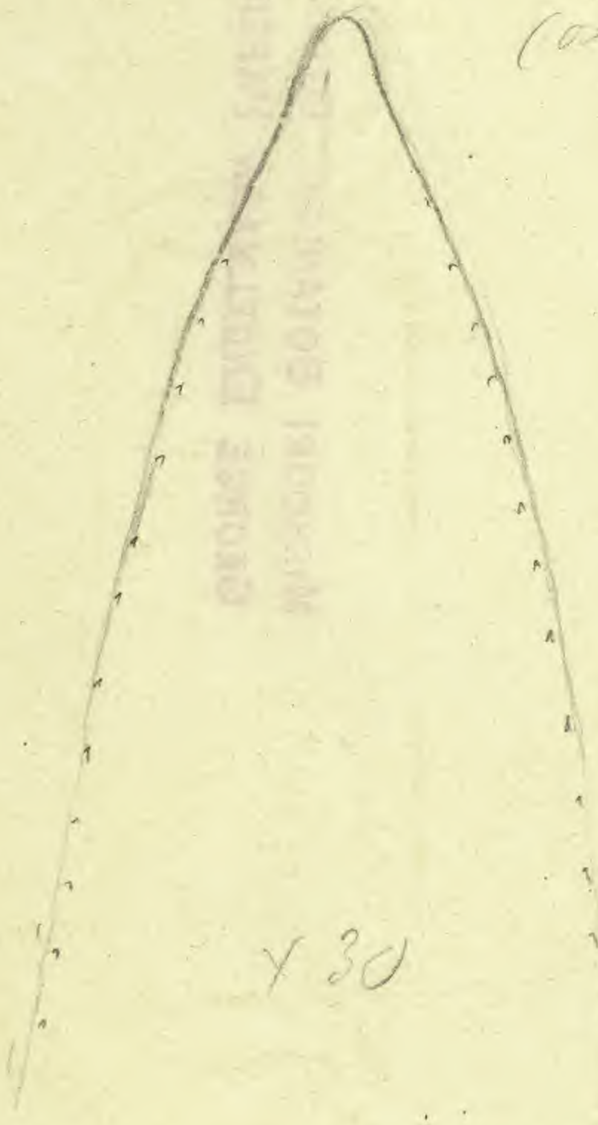
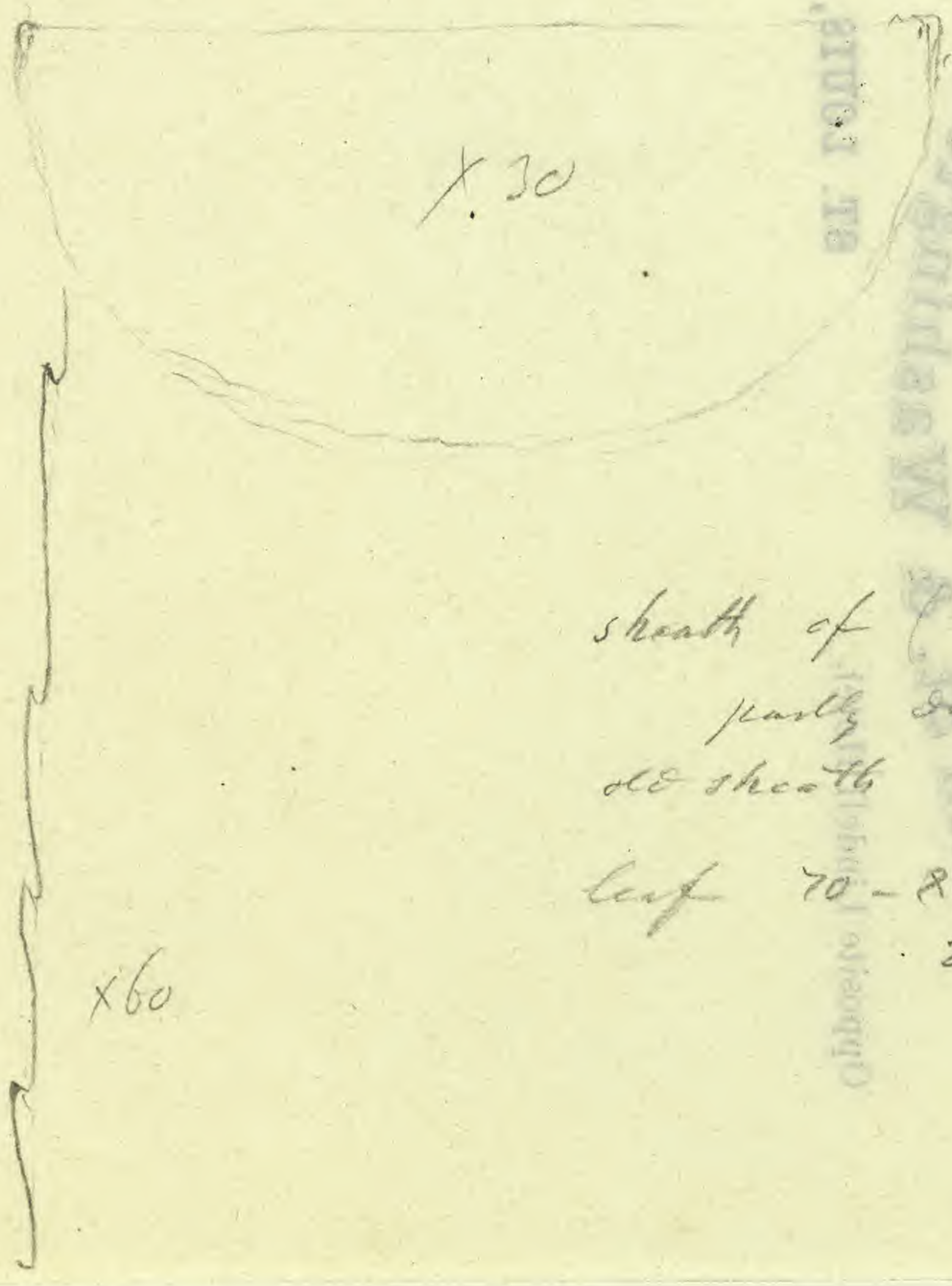
1969 Pinus jeffreyi var? Bench. Oct. 23 1870
Bear Valley, Sacramento Mts.
April 1868
(in Hb Kew)

Hartweg
(only 2 small trees seen)





sheath of (1 year old?) leaf
early destroyed 6 mm
old sheaths 3 mm
leaf 70–80 mm long
2 mm wide

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L. O. WOODRUFF,

Druggist,

Cor. Sixth St. & Washington Ave,

Opposite Lindell Hotel, **ST. LOUIS, MO.**

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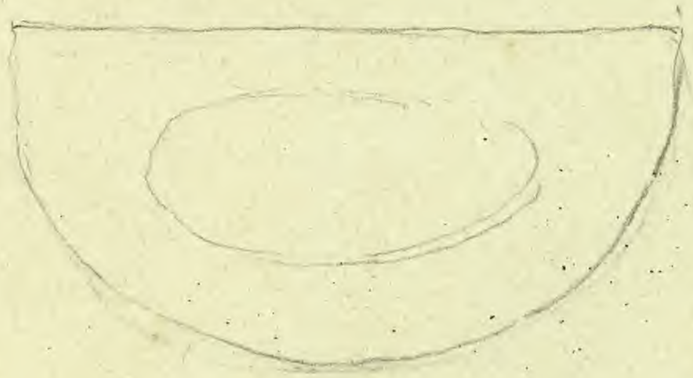
" Pinus inops " Oct 22 1870

×60

Sitka & 46 St Petersburg

×30



×30

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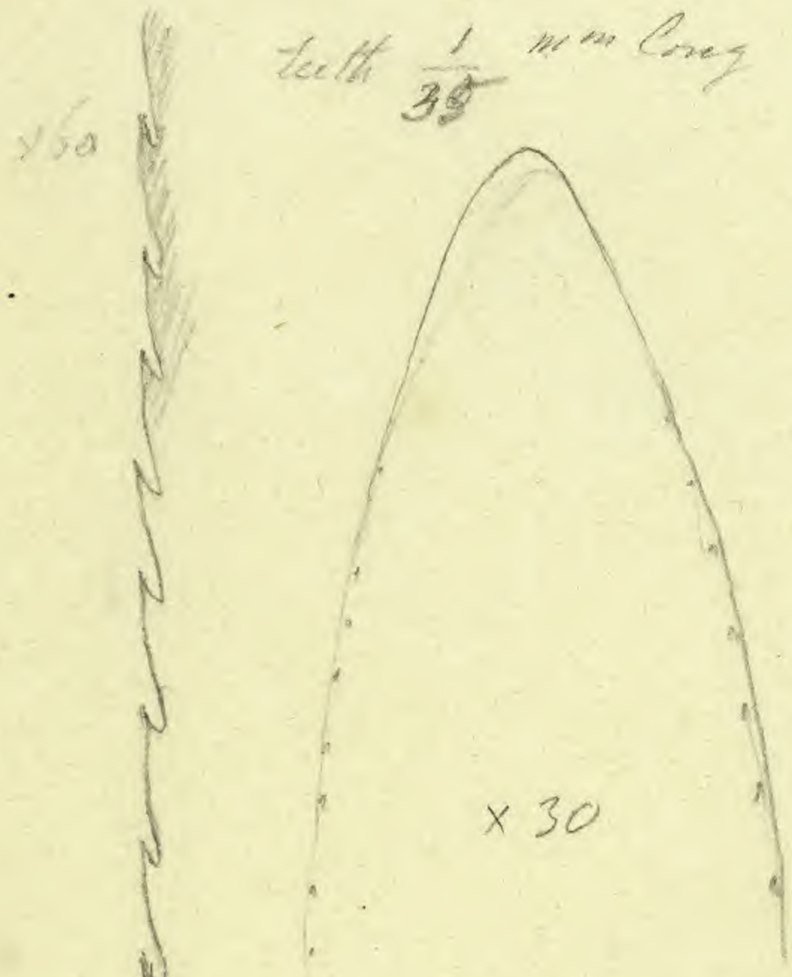
"G" Pinnes mutica { so named in Hb. Edinburg and in Oregon Com. Rep. 1852 Octo 23 1870

Nesqually, Puget's sound Jeffrey in Hb. Edinburg

teeth $\frac{1}{35}$ mm long



leaves 40 mm long
old sheaths 2½ mm

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